MASS.
MA30.2:
M755/
983-2

MASS. MA30.2:M755/983-2

MONOGRAPH

of the

COMMONWEALTH of MASSACHUSETTS

"Too many men occupying public positions lack real brain power that comes only from fundamental training, that makes it possible for a man to resist the petty temptations, to see through them and beyond them to the more permanent returns of service."

from a speech by George Herbert McCaffrey, Ph. D. before the Roxbury Latin School Alumni Association on the 275th anniversary of the school's founding

by
Fred J. Gibney

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I GENERAL INFORMATION

1. Official Name: Commonwealth of Massachusetts

a. State Capital: Boston

2. Location: Northeastern sector of the continental United States bordered by the states of Vermont and New Hampshire on the north, the Atlantic Ocean on the east, the states of Rhode Island and Connecticut on the south and the state of New York on the west. The State House cupola in Boston is at latitude 42° 21′ 29.036″, longitude 71° 03′ 51.075″.

3. Population,

1950:	4,690,514	1980:	5,737,081
1955:	4,837,645*		
1960:	5,149,834		
1965:	5,295,281*		
1970:	5,689,170		
1975:	5,789,478*		

*In general, the military and students boarding at schools were not included.

a. Population Rank: 10th of the 50 states

b. Cities over 80,000 (1980) Boston(592,994), Worcester(161,799), Springfield(152,319), New Bedford(98,478), Cambridge(95,322), Brockton(95,172), Fall River(92,574), Lowell(92,418), Quincy(84,743), Newton(83,622).

4. Area in Sq. Miles: Land–7,838.68, Water–254.34, Total–8,093.02

a. Area, Rank: 45th of the 50 states

5. Density, (Persons per square mile)

	Land Area	Total Area
1950:	598	580
1955:	617	598
1960:	657	636
1965:	676	654
1970:	726	703
1975:	739	715
1980:	732	709

a. Density, Rank: 3rd of the 50 states–Land Area and Total Area

6. Income (Personal)

a. Total $64,248,000,000 (1981) 10th in U.S.

b. Per Capita $11,128 (1981) 12th in U.S.

7. Climate:

	Boston	Pittsfield	Worcester
Normal Temp. in Jan.–	29.9°F	21.8°F	25.9°F
Normal Temp. in July–	73.7°F	67.8°F	70.6°F
Normal Annual Precip.–	42.8 inch.	44.4 inch.	45.4 inch.

8. Elevation: From sea level in the east to 3,491 feet (Mt. Greylock in the town of Adams) northwestern Massachusetts

9. Geographic Center: Southern sector City of Worcester

10. Topographical Characteristics: The state is divided into 7 topographic regions. From east to west: 1) *Cape Cod*– flat, nearly at sea level with many lake or pond filled depressions; 2)*Boston Basin*– gentle contour with tear-drop shaped hills (drumlins) below 250 feet; 3) *Seaboard Lowland*– flat to gently rolling with 1,000 to 2,000 foot elevations; 4) *New England Upland*– rolling to hilly plateau with 1,000 to 2,000 foot elevations, largest of the regions which straddles the; 5) *Lower Connecticut Valley*– flat to gently rolling with less than 100 to 400 foot elevations; 6) *Berkshire Hills*– rough rolling upland of a general elevation of 2,000 feet; and 7) *Green Mountains and Foot Hills*– rugged and mountainous with 1,500 to 3,000 foot elevations.

I GENERAL INFORMATION (Cont'd)

10. Topographical Characteristics: (cont'd)

The land surface has 24 drainage basins—along the east coast: Parker, Ipswich, Mystic, Charles, Neponset, Weymouth, Taunton and Ten Mile; east and central Massachusetts: the Merrimack (with its tributaries Assabet, Concord, Nashua Shawsheen and Sudbury) and Blackstone; central and western Massachusetts: the Connecticut (with its tributaries Chicopee, Deerfield, Farmington, Miller and Westfield) and French and Quinebaug; and for western Massachusetts: Hoosic and Housatonic. The state has 1,980 miles of tidal shoreline, 190 miles east to west and 110 miles north to south, at its widest parts.

11. Aerial Survey Photos:

Information on the availability of aerial survey photos for sections of the state may be obtained from the Geodetic Survey Div., Mass. Dept. of Public Works, 100 Nashua St., Boston, MA 02114.

12. U.S.G.S. Topographic Maps:

The entire state covered in various combinations. Maps may be obtained from Distribution Section, U.S. Geological Survey, 1200 South Eads Street, Arlington, VA 22202 or local agents.

13. Significant Dates:

2 Nov. 1620 - Pilgrims land at Provincetown.
21 Dec. 1620 - first permanent English settlement in America at Plymouth
2 Jul. 1776 - Adopted statehood
6 Feb. 1788 - 6th state to ratify U.S. Constitution.
15 Mar. 1820 - last major change in state's territory, District of Maine became a state.

14. Government:

Six constitutional officers elected for 4 years: Governor, Lieutenant-Governor, Attorney-General, Secretary, Treasurer and Receiver-General and Auditor. Eight Executive Councillors elected for 2 years from 8 districts to give advice to and confirm certain appointments of the Governor. General Court (Legislature) elected for 2 years composed of 40 Senators and 160 members of the House of Representatives.

15. Governmental Subdivisions:

The Commonwealth is divided into 14 counties with very little governmental significance and no legislative powers. There are 351 municipal entities, each with its own form of government and a large amount of home rule—39 are cities and 312 are towns.

16. Special Districts:

One of the six New England States
11 Congressional Districts

II POPULATION – U. S. CENSUS – 1980

A. During the decade 1970 to 1980, the population of the Commonwealth increased by 47,911, or 0.8%. There was an estimated excess of births over deaths of 193,092 and an estimated out-migration of −145,181.

B-1 NUMBER OF PEOPLE

Year	Number	Percent of 1930 State	N.E.	U.S.
1920	3,852,356	90.7	90.6	86.1
1930	4,249,614	100.0	100.0	100.0
1940	4,316,721	101.6	103.3	107.3
1945	4,493,281	105.7	101.9*	108.3*
1950	4,690,514	110.4	114.1	122.8
1955	4,837,645	113.8	118.6*	134.0*
1960	5,149,834	121.2	128.7	145.6
1965	5,295,281	124.6	136.7*	157.3*
1970	5,689,170	133.9	145.1	164.9
1975	5,789,478	136.2	149.4*	173.0*
1980	5,737,081	135.0	151.2	183.8

B-2. AGE COMPOSITION

Age	Number	% of Total State	N.E.	U.S.
Under 5	336,481	5.9	6.1	7.2
5-14	836,695	14.6	14.9	15.4
15-19	547,839	9.5	9.5	9.3
20-64	3,289,423	57.3	57.2	56.7
65 & over	726,599	12.7	12.3	11.3
Under 18	1,490,284	26.0	25.6	28.3
21 & over	3,900,569	68.0	66.1	66.1
Median Age		31.2	31.2	30.0

B-3. ETHNIC – RACIAL DATA

	Number	Percent of Total State	N.E.	U.S.
White	5,362,836	93.5	93.8	83.1
Black	221,279	3.9	3.8	11.7
Am. Ind., Eskimo, Aleut	7,743	0.1	0.2	0.6
Asian + Pacific Islander	49,501	0.9	0.7	1.5
Other	95,678	1.7	1.5	3.0
Hispanic/Spanish origin	141,043	2.5	2.4	6.4

ANCESTRY

Of the total 1980 population, 55.2% identified with the single ancestry group (3,167,235), 33.0% with the multi-ancestry group and 11.7% not specified. Of the single ancestry group the 6 leading groups were: Irish (21.0%), English (14.5%), Italian (13.6%), French (9.9%), Portugese (6.0%) and Polish (5.1%).

B-4. EDUCATION (Persons 25 yrs. old & over)

	State	N.E.	U.S.
Median No. of School years completed	NA	NA	NA
Completing less than 5 grades	NA	NA	NA
Completing High School only	37.0%	35.9%	34.4%
Completing College or more	20.0%	19.3%	16.3%

B-5. OCCUPATION

Of the 4,463,473 persons 16 years old and over in the State 2,811,477, or 63.0% were in the civilian labor force. Of these 44.8% were females and 55.2% were males.

Group	Number Emp.	% of Total State	N.E.	U.S.
Exec., Adm., Mgr	289,059	10.8	10.7	10.4
Prof. Specialty	405,046	15.1	14.3	12.4
Technicians + Related	101,209	3.8	3.4	3.1
Sales	250,973	9.4	9.3	10.0
Adm. Sup, Clerical	502,803	18.8	17.8	17.1
Pvt. Hsld.	10,088	0.4	0.4	0.6
Protective Serv	50,100	1.9	1.6	1.5
Service (ex. Hsld + Protective	300,282	11.2	10.8	10.9
Farming, Forestry, Fishing	21,719	0.8	1.3	2.8
Precision Production, Craft & Repair	300,143	11.2	12.3	12.8
Mach. Opers., Assemb, Inspectors	266,756	10.0	11.1	9.3
Transp. + Mat'l Mvg.	85,861	3.2	3.4	4.5
Handlers, Cleaners, Helpers, Laborers	92,128	3.4	3.5	4.5

B-6. POLITICS, PARTY AFFILIATION, 1982

Total Registered Voters	3,048,180
Registered Democrats	45.6%
Registered Republicans	14.5%
Unenrolled Voters	39.9%

B-7. INCOMES (1979)

	Families	% of Families State	N.E	U.S
Incomes under $5,000	86,368	6.0	5.8	7.3
$5,000 – $9,999	162,705	11.3	11.7	13.2
$10,000 – 19,999	403,466	28.1	29.7	29.8
$20,000 – 34,999	525,597	36.6	35.8	33.5
$35,000 – 49,999	172,950	12.0	11.3	10.6
$50,000 + over	84,402	5.9	5.7	5.6
Median Fam. Inc.		$21,329	$20,734	$19,908
Per. Cap. Inc. (Non-inst'l)		$7,461	NA	$7,371
Total Families	1,435,488			

* Estimates from P-25 Report, U.S. Dept. of Commerce

Revised
Dec. 82

III HOUSING – U.S. CENSUS, 1980

A. The 1980 U.S. Census reported that the State had 2,208,146 housing units of which 71,276 (3.2%) were vacant seasonal and migratory and 2,136,870 (96.8%) were year-round housing units. Of the year-round units, 1,149,819 (54.7%) were owner-occupied, 862,898 (40.4%) were rented and 104,153 (4.9%) were vacant

B-1. TYPE OF STRUCTURE

	No. of Units	% of Total State	N.E.	U.S.
1 Unit	1,119,097	52.4	57.1	66.2
2 Units	293,184	13.7	12.0	6.1
3 & 4 Units	282,249	13.2	11.6	5.1
5 or more Units	425,159	19.9	17.2	17.5
Mobile Home or Trailer	17,181	0.8	2.0	5.0

B-2. NEW CONSTRUCTION*

Year	Housing Units
1979	21,300
1980	16,500
1981	16,794

B-3. AGE

Year Built	No. of Units	% of Units State	N.E.	U.S.
1979-Mar 1980	28,796	1.3	1.9	3.4
1975-1978	96,518	4.5	6.0	9.7
1970-1974	188,442	8.8	9.9	12.8
1960-1969	299,986	14.0	15.0	19.4
1950-1959	308,234	14.4	14.6	17.3
1940-1949	217,833	10.2	10.1	11.3
1939 or earlier	997,061	46.7	42.6	26.1

B-4. PERSONS PER UNIT

Persons	Units	% of Units State	N.E.	U.S.
1 Person	495,677	24.4	23.0	23.6
2 Persons	616,423	30.3	30.9	32.5
3 Persons	339,743	16.7	17.1	18.1
4 Persons	303,038	14.9	15.6	16.0
5 Persons	141,132	7.9	8.0	4.0
6 Persons or more	116,684	5.7	5.4	5.8
Median Persons per unit		2.3	2.3	2.3

B-5. VALUE OF ONE-DWELLING-UNIT STRUCTURES

	No. of Units	% of Units State	N.E.	U.S.
Under $20,000	37,739	4.1	4.4	12.1
$20,000-$49,999	449,868	48.8	43.8	41.8
$50,000-$99,999	371,174	40.3	42.6	36.4
$100,000-$199,999	56,782	6.2	7.9	8.2
$200,000 or more	5,738	0.6	1.2	1.4
Median Value		$48,500	$51,500	$47,300

B-6. GROSS RENTS

	Units	% of Units State	N.E.	U.S.
Under $100	66,997	7.9	7.4	6.1
$100-$149	62,632	7.4	7.3	9.3
$150-$199	119,733	14.1	14.4	15.3
$200-499	547,000	64.4	63.9	60.8
$500+Over	28,694	3.4	3.2	3.7
No Cash Rent	24,690	2.9	3.8	4.7
Median Rent		$254	NA	$243

* From building permits issued.

IV ECONOMIC BASE

A. HISTORIC TRENDS

From the beginnings in the first permanent English settlement at Plymouth, industry developed and expanded rapidly. At first it was small-scale farming to raise the basic necessities to sustain life, then Yankee ingenuity showed itself in the variety of products the farmers produced in their homes to supply their own and their neighbors' needs.

Necessity being the spark to kindle invention – shipyards sprang up to build ships to transport produce and travelers first to coastal and then international markets. Water transportation being necessary locally because roads had not been built, in that, the wherewithal to build them was not available and, even if built, the Indians were still resisting the encroachment of the settlers. Shipyards brought other industries into existence – ropewalks, canvas makers, sail-makers, fabricators of metals, lumbering, etc.

The lifting of England's oppressive hand did not bring into being a land of 'milk and honey,' but rather a series of inter-regional squabbles resulting in a period of economic depression. The adoption of the federal constitution and Washington's guidance brought stability to the economy. Massachusetts expanded her maritime interests by trade with the orient and took over much of the world trade formerly handled by England and France.

Printing and publishing, one of the State's largest industries, got its start in Cambridge (1640) with the printing of The Bay Psalm Book. Benjamin Franklin and his father had the first commercial soap works in America.

The Embargo Act, calculated to punish England and France for their interference with our ships, caused much economic suffering, but that was worsened by Mr. Madison's War of 1812. The inability to import goods forced the new country to enter the manufacturing field and Massachusetts, because of climate, topography and skilled labor, became a leader in textiles, leather products, apparel and machinery.

Francis Cabot Lowell set up and perfected his steam power loom in Waltham in 1814 which aided Fall River, Lawrence, Lowell and New Bedford to become great cotton textile manufacturing centers. Other beginnings leading to industrialization during this period were: first American railroad in Quincy (1826), William Beecher made the first eye-glasses in America (1833) in Southbridge, Charles Goodyear first vulcanized rubber (1839) in Woburn, Ebenezer Buttrick invented standardized clothes patterns (1863) in Sterling.

War between the states (1861-1865) established the Commonwealth as a leader in the country's industrial economy, a position which continued with the added desirable asset of industrial diversification, due in large measure to the adaptability of its labor force. Developments in this era included: demonstration of the first telephone by Alexander Graham Bell (1876) in Boston, William Stanley demonstrated the first transformer (1886) in Great Barrington and Charles and Frank Duryea perfected the first successful gasoline powered automobile (1892) in Springfield.

Massachusetts factories produced more than one-third of the country's woolen goods. Leather and leather products became a very important segment of the State's economy and by 1900 the factories of Boston, Brockton, Haverhill, Lynn, Marlborough, Worcester and other Massachusetts municipalities were turning out about half of the United States' footwear (leather) production.

The following developments were significant in projecting the nation, if not the world, into the computer-space age: (1926) the first liquid-propelled rocket fired by Prof. Robert H. Goddard in Auburn, (1928) the first computer, non-electrical differential analyzer developed by Dr. Vannevar Bush of M.I.T. in Cambridge and (1944) first automatic digital computer, developed by Howard Aiken of Harvard University in Cambridge.

Industry expanded to meet the demands of World War I and continued to expand until the economic crisis of 1929. Loss of some industries to locations nearer sources of raw materials and cheaper labor held back economic recovery until the advent of World War II when this State's three major assets – skilled labor, research facilities and nearness to major markets – again raised the economy to its greatest heights. The Korean and Vietnamese conflicts continued the Commonwealth's industrial success, broadening its scope into the fields of atomic power, aero-space, oceanography and electronics.

During the latter part of the seventies the leadership trend of Massachusetts in more sophisticated and efficient manufacturing methods became apparent in the evolution of segments of the manufacturing industry known as high technology; once again demonstrating the Commonwealth's proficiency in adapting new techniques developed by research.

IV ECONOMIC BASE (Cont'd)

B. PRESENT ECONOMY

1. General

The economy of the Commonwealth is dependent upon the economic well being of the Massachusetts portions of 10 standard metropolitan statistical areas which had 83% of the 1980 state population and 87% of the 1982 employment covered by employment security. The 10 SMSAs, which are also the leading centers of labor, manufacturing, population and trade, consist of Boston, Brockton, Fall River, Fitchburg-Leominster, Lawrence-Haverhill, Lowell, New Bedford, Pittsfield, Springfield-Chicopee-Holyoke and Worcester. All the SMSAs except the Pittsfield SMSA are part of a megapolis composed of 47 SMSAs from the Manchester, NH SMSA to the Washington, DC-MD-VA SMSA (see Appendices A and C).

In 1982, 128,453 units reported to the Massachusetts Division of Employment Security that they had an annual payroll of $42,186,102,958 and an average of 2,246,690 persons employed. The following table gives comparable statistics for the Massachusetts portions of the State's 10 SMSAs:

SMSAs	No. of Units	1982 Annual Payroll *	Avg. 1982 Employees *
Boston	64,533	25,529,749,722	1,451,493
Brockton	2,765	794,379,375	55,396
Fall River *	2,633	617,609,840	50,560
Fitchburg-Leominster	2,007	571,265,281	37,718
Lawrence-Haverhill *	4,234	1,514,806,862	92,240
Lowell *	3,523	1,238,592,190	78,611
New Bedford	3,539	840,735,561	64,023
Pittsfield	2,043	627,266,007	38,603
Springfield-Chicopee-Holyoke *	10,820	3,230,041,831	222,868
Worcester	7,710	2,352,796,317	155,178
Total for SMSAs	103,807	37,317,242,986	2,246,690

* Private Non-Profit and Profit and Government

The GROSS STATE PRODUCT (in constant dollars) as reported by the Federal Reserve Bank of Boston, 1970-1981 (1)--

GSP - "the market value of goods and services produced by a state's economy after the deduction of intermediate products used up by production."

(In Millions of Dollars)

1970	31,630	1974	34,407	1978	36,052
1971	32,028	1975	33,073	1979	37,435
1972	33,644	1976	33,794	1980	37,945
1973	35,205	1977	34,988	1981	39,777

(1) See Appendix for industry breakdown of GSP

IV ECONOMIC BASE (Cont'd)

B. PRESENT ECONOMY (Cont'd)

2. Manufacturing

In 1982, 10,694 manufacturing units reported to the Massachusetts Division of Employment Security that they had an annual payroll of $12,608,158,824 and an average employment of 640,044 persons. The 7 largest manufacturing groups in order of importance as employers were electric and electronic equipment, machinery (except electrical), instruments and related products, fabricated metal products, printing and publishing, apparel and finished goods and transportation equipment.

The 3 largest manufacturing groups, in order of importance as employers, in the 10 industrial areas (SMSAs) of the Commonwealth were:

Boston -	electric and electronic equipment, machinery (except electrical) and instruments and related products
Brockton -	leather and leather products, instruments and related products and electric and electronic equipment
Fall River -	apparel and other finished goods, textile mill products and electric and electronic equipment
Fitchburg-Leominster	machinery (except electrical), plastic products and paper and allied products
Lawrence-Haverhill -	electric and electronic equipment, transportation equipment and machinery (except electrical)
Lowell -	machinery (except electrical), electric and electronic equipment and transportation equipment
New Bedford -	apparel and other finished goods, electric and electronic equipment and fabricated metal products
Pittsfield -	electric and electronic equipment, paper and allied products and machinery (except electrical)
Springfield-Chicopee-Holyoke -	fabricated metal products, machinery (except electrical) and paper and allied products
Worcester -	machinery (except electrical), fabricated metal products and stone products

The location of major concentrations of manufacturing groups (by 2-digit SIC codes) i.e. with 490 or more employees in any one industry grouping, may be found in Appendix F.

IV ECONOMIC BASE (Cont'd)

B. PRESENT ECONOMY (Cont'd)

3. Trade

In 1982, 11,396 wholesale units reported to the Massachusetts Division of Employment Security that they had an annual payroll of $2,740,398,907 and an average employment of 131,180 persons; while 32,379 retail units had an annual payroll of $3,966,642,150 and an average of 450,434 persons employed.

The 1977 U.S. Census of Business reported the following retail trade data (based on the 1972 Standard Industrial Classification) for the State:

	STATE
Establishments	46,665
Sales	$18,444,560,000
Per Capita Sales	$3,186
Paid Employees in workweek including March 12	372,097

Classification of Business	Estab.	Sales (Add 000)	% of Total
Building Matl., Hardware, Farm Equipment Dealers	1,819	737,125	4.0
General Merchandise Group	1,298	2,367,084	12.8
Food Stores	5,714	4,183,277	22.7
Automotive Dealers	2,828	2,894,098	15.7
Gasoline Service Stations	3,876	1,277,296	6.9
Apparel, Accessories Stores	3,338	1,068,980	5.8
Furniture, Home Furnishings, Equipment Stores	3,244	734,253	4.0
Eating & Drinking Places	9,917	1,820,829	9.9
Drug Stores, Proprietary Stores	1,678	571,573	3.1
Misc. Retail Stores	12,953	2,790,045	15.1

4. Classification of Worker

The 1980 U.S. Census of Population, which reported information on the basis of residence rather than place of employment, showed that there were 209,264 private wage and salary workers, 44,964 government workers, 13,106 self-employed and 694 unpaid family workers living in the Commonwealth.

5. Agriculture

It is interesting to note that in this age of high technology that the 1978 Census of Agriculture showed that between the Censuses of 1974 and 1978 the number of farms increased from 4,497 to 5,905 and the land acreage in farms increased from 601,734 to 680,513.

See Appendix D for additional data on agriculture.

V EMPLOYMENT AND PAYROLLS – 1982

As Reported to the Division of Employment Security

A. All Industry

SIC CODE	Industry	No. of Units	Annual Payroll	EMPLOYMENT Average	EMPLOYMENT Distribution	EMPLOYMENT Rank
01-07	Agriculture & Services	1,705	132,987,114	11,006	0.4 %	12
08	Forestry	13	544,759	54	0.0	15
09	Fisheries	473	60,726,148	3,523	0.1	13
10-14	Mining	96	23,528,559	1,067	0.0	14
15-17	Construction	12,190	1,617,570,474	79,924	3.1	6
20-39	Manufacturing	10,694	12,608,158,824	640,044	24.7	1
41-47	Transportation	3,907	1,038,473,838	58,927	2.3	9
48	Communication	464	1,038,767,180	38,887	1.5	15
49	Utilities	286	483,531,586	18,341	0.7	11
50-51	Wholesale Trade	11,349	2,740,398,907	131,180	5.1	5
52-59	Retail Trade	32,379	3,966,642,150	449,867	17.4	3
60-62	Finance	2,048	1,314,998,819	72,820	2.8	7
63-64	Insurance	2,591	1,242,588,867	65,777	2.5	8
65-67	Real Estate	4,096	409,335,505	25,065	1.0	10
70-89	Services	42,090	9,328,103,292	639,987	24.7	2
91-97	Gov't(Local/State/Fed'l)	4,052	6,180,747,016	350,188	13.5	4
	Total	128,453	42,186,102,958	2,586,663	—	—

B. Manufacturing

SIC CODE	Group	No. of Units	Annual Payroll	EMPLOYMENT Average	EMPLOYMENT Distribution	EMPLOYMENT Rank
20	Food & Kindred Products	517	444,698,654	25,445	4.0 %	10
21	Tobacco Manufactures	1	unit included in	Misc. Mfg.	In a	
22	Textile Mill Products	281	319,307,274	20,214	3.3	11
23	Apparel & Finished Goods	687	413,637,963	37,471	5.9	6
24	Lumber & Wood Products	414	66,623,849	4,749	0.7	17
25	Furniture & Fixtures	322	108,878,124	6,978	1.1	16
26	Paper & Allied Products	310	521,506,554	26,368	4.1	9
27	Printing & Publishing	1,554	798,524,743	45,567	7.1	5
28	Chemicals & Allied Products	340	439,338,315	17,611	2.8	13
29	Petroleum & Coal Products	48	42,091,519	1,649	0.3	18
30	Plastic & Rubber Products	504	479,810,415	29,465	4.6	8
31	Leather & Leather Products	300	239,367,804	18,481	2.9	12
32	Stone, Clay & Glass Products	309	240,703,850	11,731	1.8	15
33	Primary Metal Industries	273	305,154,758	15,682	2.5	14
34	Fabricated Metal Products	1,116	950,605,985	47,851	7.5	4
35	Machinery, except Electrical	1,746	2,362,579,733	105,990	16.6	2
36	Electric & Electronic Equip.	745	2,358,475,954	110,159	17.3	1
37	Transportation Equip.	176	808,116,800	31,034	4.8	7
38	Instruments & Related Products	570	1,334,142,552	59,687	9.3	3
39	Misc. Manufacturing Ind.	542	374,593,978	23,892	3.7	—

NOTE: Units- Number of operations of different industrial activity within a municipality, regardless of corporate affiliation

VI GOVERNMENT FINANCE

A-1. GENERAL

Totals of full market value of all taxable property, tax levy and net debt for the 351 municipalities are expressed in Sections A-2, A-3 and A-4. The cost of municipal government (including schools is raised by each municipality principally through the levies on real property.

A-2. ASSESSED VALUATION OF ALL TAXABLE PROPERTY AT FULL MARKET VALUE, Jan. 1*

Year	Amount
1970	31,016,200,000
1972	35,051,300,000
1974	54,728,100,000
1976	63,103,898,000
1978	68,604,908,000
1980	88,288,293,000
1982	125,678,557,000

*These are totals of the amounts set for each municipality by the State Tax Commission every 2 years.

A-3. TOTAL TAX LEVY OF THE 351 MUNICIPALITIES

Year	Amount
Calendar Year 1972	2,051,183,755
Calendar Year 1973	2,169,494,886
Fiscal Year 1975	2,322,428,470
Fiscal Year 1976	2,460,888,661
Fiscal Year 1977	2,785,975,567
Fiscal Year 1978	2,967,933,295
Fiscal Year 1979	3,030,567,100
Fiscal Year 1980	3,001,158,061
Fiscal Year 1981	3,346,687,235
Fiscal Year 1982	3,035,539,706

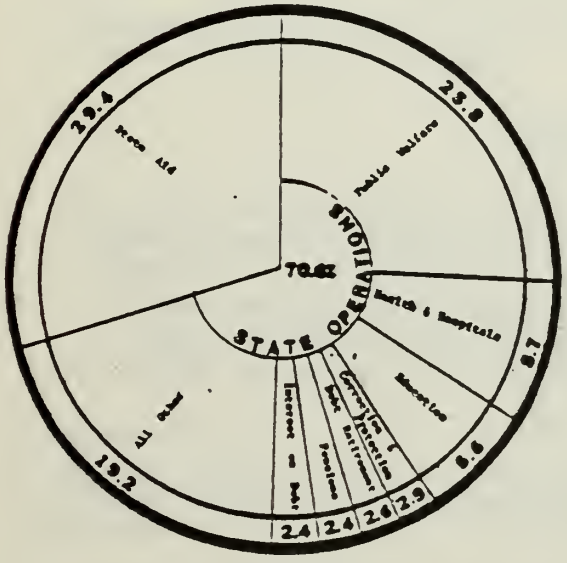
A-4. TOTAL NET DEBT OUTSTANDING–351 MUNICIPALITIES

As of Date	Amount
1 Jan. 1970	1,255,984,852
1 Jan. 1972	1,653,278,738
1 Jan. 1973	Not Avail.
30 June 1975	2,087,194,363
30 June 1976	2,190,431,084
27 Dec. 1977	2,231,932,468
30 June 1978	2,224,739,208
30 June 1979	2,171,005,395
30 June 1980	2,126,665,449
30 June 1981	1,994,821,565
30 June 1982	1,909,364,333

VI GOVERNMENT FINANCE (Cont'd)

A-5. State

A brief outline of the finances--expenditures and revenues of the Commonwealth for the fiscal year 1982 may be seen in the pie charts below as found in the 1982 Abstract of the Financial Report of the Comptroller:--



COMPARATIVE STATEMENT OF EXPENDITURES 1982 - 1981
(000's Omitted)

	1982	1981
State Aid	$2 246 397	$2 016 227
Public Welfare	1 970 042	1 806 576
Health & Hospitals	665 504	635 430
Education	509 398	501 161
Corrections & Protection	225 593	245 322
Debt Retirement	197 792	279 806
Pensions	185 911	173 105
Interest on Debt	180 005	162 707
Other State Expenditures	1 460 850	1 337 368
	$7 540 440	$7 253 318

COMPARATIVE STATEMENT OF REVENUES 1982 and 1981
(000's Omitted)

	1982	1981
Taxes:		
Income	$2 324 952	$2 057 644
Sales and Use	917 142	869 716
Corporations, Banks & Insurance Companies	725 500	640 152
Motor Fuel	248 297	237 526
Other	264 305	288 681
Total Taxes	4 527 144	4 137 549
Federal Reimbursements, Grants & Revenue Sharing	1 817 472	1 842 777
Departmental Revenue and Other	751 781	670 816
Bond Sales	777 148	257 200
Total State Revenue	$7 514 525	$7 318 478

VI GOVERNMENT FINANCE (Cont'd)

A-6. Taxes

BUSINESS OR MANUFACTURING CORPORATIONS

Income Measure	9.5%
Property Measure (reduced from $7.98 per $1,000 since 1972)	$2.60 per $1,000
Minimum Tax	$228.00

Commercial Banks, Banking Associations, Trust Companies – 12.54% (net income).

Savings, Cooperative Banks, Federal Savings Banks and Savings and Loan Associations - 0.254% of net operating income and 0.125% of average deposits.

Life Insurance Companies and Insurance Departments of Savings Banks - 2.0% on taxable premiums, and if domestic - 14% on Mass. taxable investment income. Casualty Companies - 2.28% on Mass. taxable premiums, and if domestic - 1% on gross investment income.

Fire & Marine Insurance Companies 5.7% (on underwriting profits).

Real Estate Transfer – $1.14 for 1st $100 to $500 of selling price (less mortgage assigned) – $1.14 for each additional $500 or fraction thereof.

PERSONAL INCOME

The State income tax law is based on two classes of income - earned and unearned:
Earned Income is taxed at 5% plus 7.5% surcharge.
Unearned Income (interest, except from Massachusetts savings accounts, dividends and net capital gains including gains from tangible property with long-term deductions starting at 20% for 1980, 40% for 1981 and 60% thereafter) is taxed at 10% plus 7.5% surcharge.

Deductions:

Social Security payments, employee business expense, child care and alimony.
Rental deduction - (½ rental payment not to exceed $2,500)

Exemptions:

1. No tax if single income is not more than $3,000; or if husband and wife joint return income is not more than $5,000.

2. Single person - $2,200

3. Husband and wife filing jointly - $2,200 plus amount of earned income not exceeding $2,200 of spouse with smaller income, plus $1,000 if earned income of such spouse is not more than $2,200 (not more than $4,400). Married persons filing separately - $1,100 each.

4. $100 for single person and $200 for husband and wife filing jointly against savings account interest from institutions within the Commonwealth, which is taxed at the 5% rate.

5. $700 for each dependent.

6. $700 additional for taxpayers and spouses age 65 or over.

7. Medical and dental expenses as claimed on U.S. return.

VI GOVERNMENT FINANCE (Cont'd)

A-6. Taxes (Cont'd)

SALES AND USE TAX

5% on gross receipts of sales (including rental) or the storage, use or consumption of tangible personal property.

Exemptions:

Machinery, replacement parts thereof, materials, tools and fuel used directly and exclusively in an industrial plant, in furnishing power to an industrial plant, in agricultural production; and in commercial fishing; food for human consumption; utilities; clothing for human wear up to $175 of sales price of any articles used as wearing material; footwear; newspapers; magazines; schoolbooks; prescription drugs; sales of vessels and barges 50 tons or over constructed in Massachusetts and sold by the shipbuilder; fuel, supplies of fuel and repairs for vessels engaged in foreign and interstate commerce; fuel for heating purposes; motion picture films for commercial exhibition; property ordinarily sold by funeral directors; motor vechicles purchased by and specially equipped for paraplegics; casual and isolated sales under given conditions; etc. Gifts of scientific equipment to non-profit educational institutions.

MISCELLANEOUS

Room Occupancy - 5.7% of total amount of rent for each occupancy.

Alcoholic Beverages and Alcohol Excise - Malt beverages $3.30 per barrel (31 gals.). Cider $.03 per wine gallon. Still wine (including vermouth) $.55 per wine gallon. Sparkling Wines and Champagne $.70 per wine gallon. All alcoholic beverages containing 15% or less alcohol $1.10 per wine gallon; beverages containing between 15% and 50% of alcohol $4.05 per wine gallon; beverages containing more than 50% of alcohol $4.05 per proof gallon.

Cigarettes - 26¢ per package of 20.

Gasoline - 10% of wholesale selling price with a minimum of 11¢ per gallon.

Employment Security Contributions - 7 schedules with rates ranging .4% to 6.0% plus Solvency Tax up to an additional 1%. Current schedule is 2.6% to 6.4% (including Solvency Tax) on wage base of first $7,000.

Public Utilities - 6.5% (net income and allocated net income of interstate companies).

Local Property Taxes - Fair cash value of real and personal property. Rates fixed annually by the local board of assessors and must be approved by the State Tax Commission. Tax administered and collected at local level.

All non-corporate businesses are taxed on personal property; all non- manufacturing corporations are taxed on machinery used in the conduct of business.

Motor Vehicle Excise - $25 per $1,000 of valuation.

VI GOVERNMENT FINANCE (Cont'd)

A-6 Taxes (Cont'd)

Motor Vehicle Registration Fees

Private Passenger Cars - $24 biennially

Trucks- diesel & gasoline- $7 per 1,000 lbs.
minimum $20 annually

Tractors- Part of semi-trailer unit
diesel & gasoline- $7 per 1,000 lbs.
minimum $48 annually

Not part of semi-trailer unit
diesel & gasoline- $7 per 1,000 lbs.
minimum $24 annually

Trailers- heavy duty-$6 per 1,000 lbs. min. $60 annually

Trailers- semi - $30 flat fee annually

Buses- Check with Registry of Motor Vehicles, giving all particulars, size, usage, etc.

Pari Mutual Tax-From 3% to 11% of amount wagered per day depending upon type of racing, plus 1/2 breakage at dog tracks and fairs.

Estate Tax-On the taxable estate, after expenses, claims, a $30,000 exemption and a marital deduction-5% to 16%. Estates under $60,000 are not taxed.

VII EDUCATION

The first free public school in America, supported by direct taxation, was the Mather School established in 1639 by the town of Dorchester (now a geographical section of Boston). The Boston Public Latin School, founded in 1635, was the first public (in that it was operated by Boston) school in America.

The Board of Regents of Higher Education has given authority to the following number of institutions to grant degrees:

89 - Baccalaureate and above with 1982 enrollment of 325,770

15 Public	102,023
74 Private	223,747

37 - Associate level degrees with 1982 enrollment of 89,550

18 Public	69,011
19 Private	20,539

126 - Total Institutions with 1982 enrollment of . . . 415,320

The State Board of Education has approved for future implementation a policy on basic skill improvement to upgrade the quality of education in the public schools of the Commonwealth.

The integrated cost per pupil in net average membership 1981-1982 $2,442

Pupil Enrollment Grades K through 12 1 Jan. 1982

Public	941,399
Private	132,820
Total	1,074,219

Distribution of High School Graduates - Classes of 1982

Number of Graduates 74,299

38% went on to a 4-year college

16% went on to a 2-year college

30% went on to work

6% to other educational facilities

11% to the military or not specified

The BAY STATE SKILLS CORPORATIONS, a joint venture by the Commonwealth and the business community, expedites the training of technicians to take their places in the high technology fields and other areas of employment needing trained personnel.

VIII TRANSPORTATION

A. GENERAL

The Commonwealth of Massachusetts has adequate facilities for handling air, land and water transportation. Thirteen established regional planning agencies, encompassing within their regions all but 8 of the 351 municipalities, have, as one of their areas of interest, the planning for adequate transportation facilities.

B. AIR

Logan International Airport in Boston is the heart of air activity in the state. This airport is the 13th busiest in the world, based on number of passengers with tickets starting or terminating at Boston. Logan is the nearest major United States' airport to its downtown business district and to Europe. In addition, the Commonwealth has 52 commercial airports, of which 26 are publicly operated and 26 privately. There are also 3 military airfields.

C. COMMUTING

The Boston and Maine Railroad supplies commuter service in the Boston Area subsidized by the Mass. Bay Transportation Authority, a state-created agency charged with the responsibility of supplying commuter service to 79 municipalities in eastern Massachusetts. Rail commuter service has been extended to Franklin, Gardner, Haverhill and Rockport. Besides rail service, the M.B.T.A. serves commuters with fleets of buses, trolley buses, subway and elevated trains and high-speed trolley cars. Rapid transit facilities have been extended to the north, to the south and are being extended to the northwest.

Recognizing the responsibility of government to supply public services when private enterprise finds itself inadequate to the task, the 1973 session of the General Court enacted legislation providing for the creation of 10 transportation authorities to serve 10 population centers of the state, subject to acceptance by the municipalities permitted to form the 10 authorities. Provision is made in the law for the municipalities adjacent to an authority's area to join said area. The 1973 law permitted the following named areas to be served by these authorities: Attleboro-Taunton, Brockton, Cape Cod, Fall River-New Bedford, Fitchburg-Leominster-Gardner, Lawrence-Haverhill, Lowell, Pittsfield, Springfield-Chicopee-Holyoke, and Worcester.

D. HIGHWAY

The major highways serving the Commonwealth may best be described as those routes emanating from Boston and vicinity like the spokes of a wheel, or ribs of a fan, strengthened by 2 arcs or radials supporting the ribs or spokes. Listed counter-clockwise: I-95 northeasterly to Maine, I-93 and US-3 to New Hampshire, the cross-state routes-State 2 (to New York), US-20 (to the Pacific Ocean in Oregon), State 9 (to Pittsfield, Mass.), I-90, the Massachusetts Turnpike, (to Seattle, Washington), and the southern route I-95 (to Florida), State 24 (to I-195 in Fall River) and State 3 (to Cape Cod). I-91 passes north to south through the Connecticut River Valley intersecting with I-90, State 9, US-20 and State 2 and on to connect with Canadian Route 10 to Montreal.

E. RAIL

The State is served by 4 Class I railroads - AMTRAK, Boston and Maine, Central Vermont (Canadian National), and CONRAIL. Other railroads serving Massachusetts are the Bay Colony, Cape Cod and Hyannis, Edaville, Fore River, Grafton and Upton, Massachusetts Central, Pioneer Valley, Providence and Worcester and Springfield Terminal.

Piggy-Back service is provided within the State by Boston and Maine at Boston and by CONRAIL at Boston, West Springfield and Worcester.

F. TRUCKING

The Massachusetts Turnpike (IR 90), one of the State's cross-state routes, has 5 tandem trailer lots at Interchanges #1 in West Stockbridge with State Routes 41 and 102, #6 in Chicopee with IR 291, #11 in Millbury with State Route 122, #14 in Weston with State Route 128 and #18 in Boston at the Beacon railyard in the Allston section of the city.

VIII TRANSPORTATION (Cont'd)

G. WATER

The six major ports in Massachusetts with 1980 statistics from the U.S. Corps of Engineers are:

Ports	Total Port Tonnage	Import Tonnage
Beverly	25,211	*
Boston	22,033,922	5,192,062
Fall River	4,804,481	727,882
Gloucester	212,707	*
New Bedford-Fairhaven	228,516	*
Salem	1,556,764	683,319
Remainder of State	143,487	*

* Not published, if under 250,000 tons.

Boston, the largest port, has one of the best natural, deep-water harbors in the world, is 200 miles nearer Africa and Europe than New York City, 1,200 miles nearer Panama and the West Coast of South America than San Francisco and nearer Rio de Janeiro and Buenos Aires than any other North Atlantic Port.

Boston is one of the leading container shipping ports in the world with equipment surpassed by none.

SHORTEST ROUTES TO IMPORTANT FOREIGN PORTS AND JUNCTION POINTS

	To FASTNET IRELAND	Boston's Advantage (miles)	To BISHOPS ROCK ENGLAND	Boston's Advantage (miles)	To PENTLAND FIRTH SCOTLAND	Boston's Advantage (miles)
Boston	2,569		2,783		2,947	
New York	2,837	168	2,957	174	3,120	173
Philadelphia	2,985	316	3,092	309	3,263	316
Baltimore	3,123	454	3,230	447	3,401	454
Norfolk	3,002	333	3,107	324	3,280	333

	To BORDEAUX FRANCE	Boston's Advantage (miles)	To STRAITS OF GIBRALTAR	Boston's Advantage (miles)	To AZORES	Boston's Advantage (miles)
Boston	3,094		3,008		2,086	
New York	3,258	164	3,180	172	2,247	161
Philadelphia	3,406	312	3,320	312	2,392	306
Baltimore	3,544	450	3,466	458	2,409	323
Norfolk	3,423	329	3,335	327	2,401	315

	To CAPETOWN SO. AFRICA	Boston's Advantage (miles)		To RIO DE JANEIRO BRAZIL*	Boston's Advantage (miles)
			Boston	4,738	–
Boston	6,707		New York	4,762	24
New York	6,786	79	Philadelphia	4,817	79
Philadelphia	6,861	154	Baltimore	4,844	106
Baltimore	6,912	205	Norfolk	4,723	15
Norfolk	6,790	83	San Francisco	7,581	2,843

(SOURCE: U.S. Navy Hydrographic Office)

*Source: Table of Distances, U.S. Dept. of Commerce

H. FOREIGN TRADE ZONES

Foreign trade zones have been established at the Ports of Boston and New Bedford.

IX ECONOMIC DEVELOPMENT

A. DEVELOPMENT INCENTIVES

1. Financial/Tax/Training/Business

The following is a listing of measures available to make the establishment or expansion of a business more profitable in Massachusetts:

FINANCIAL INCENTIVES

Massachusetts Capital Resource Company- Privately funded by domestic life insurance companies to provide loans that are usually unsecured.

Massachusetts Business Development Corporation- For small businesses unable to obtain financial requirements from conventional sources.

Community Development Finance Corporation- Financing in conjunction with community development corporations to entrepreneurs unable to obtain funding from conventional sources.

Loan Guarantees- Mortgage Insurance on loans to industries in need of financing.

Industrial Revenue Bonds- Low cost bond financing for industrial development on the part of a company by a municipality.

Massachusetts Foundation- Provides permanent mortgage money to developers and industrial concerns building new facilities in Massachusetts.

Massachusetts Technology Development Corporation- Provides venture capital to new and expanding high technology companies.

TAX INCENTIVES

Loss Carry Over- Losses for any new corporation in the first 5 years of operation may be carried forward for tax purposes.

Alternative Energy Use- Tax reductions for use of alternative energy sources.

Export Sales Exemption- Exemption from sales tax on export sales of multistate and multi-national corporations.

Investment Credit- A 3% tax credit on cost of depreciable real and tangible property.

25 Percent R&D Deduction- A 25% deduction for R&D contributions to in-state schools/colleges.

Payroll Factor- A growth incentive establishing a ceiling beyond which payrolls of multi-state corporations are not counted for taxation purposes.

Pollution Controls- Tax reductions for use of pollution controls.

Property Tax Exemption- Exemption on tangible property (inventory, machinery and equipment) and inventory and equipment of non-manufacturers.

Sales Tax Exemption- Exemption on machinery and replacement parts and by manfacturers and corporations primarily engaged in research and development.

Targeted Jobs Tax Credit- For hiring eligible employees.

Five Year Tax Exemption- On gross income derived from the development in the state of patents useful for energy conservation or from activities related to such development.

TRAINING INCENTIVES

Bay State Skills Corporation- A state and business funded program that works with businesses and schools to meet training needs.

Job Training Partnership Act- Provides employment oriented training to disadvantaged youths and adults and retraining to dislocated workers.

BUSINESS INCENTIVES

Massachusetts Community Economic Development Assistance Corporation- Provides technical assistance in a broad range of expertise to community based non-profit organizations.

SITE Inventory Tracking Exchange- Serves as a liaison between the state and local economic development agencies for clients seeking to start a new operation in the Commonwealth.

Massachusetts Small Business Development Centers- Provide comprehensive business management and technical assistance to the small business community.

Massachusetts Small Business Purchasing Program- Reduces some of major hinderances to small business participation in state purchasing.

Call One- Eliminates multiple calls to state agencies to solve state related business problems.

IX ECONOMIC DEVELOPMENT (Cont'd)

A. DEVELOPMENT INCENTIVES (Cont'd)

2. Labor Stability

During the period 1971-80 the Commonwealth ranked 1st in labor stability among the 10 states having the largest number of non-agricultural employees. Stability is based on non-agricultural employment and days idle from labor disputes per 10,000 days available – in this way all states, large and small, are put on a fair comparative basis.

3. Geographical

The Northeast American Market (500-mile radius of the City of Worcester – see Appendices A, B and C) includes:

-- an estimated population of 77,357,648, of which 60,793,350 are in the United States (26.8% of U.S. total) and 16,564,298 are Canadian (68.0% of Canadian total)

-- 11 states, District of Columbia and parts of 4 states in the United States; and in Canada 1 province and parts of 3 others

-- 75 entire Standard Metropolitan Statistical Areas (centers of industry, population and trade) and partial inclusion of 4 other SMSAs in the United States with a total population of 50,396,232, or 22.2% of the U.S.

-- 13 of the 24 Canadian Metropolitan Areas with a total population of 9,372,655, or 38.5% of the Canadian total.

B. LABOR SUPPLY and WAGE RATES

1. Supply

Labor supply and types of workers available may be obtained from the labor market economists of the Research Department, Massachusetts Division of Employment Security, Charles F. Hurley Building, Government Center, Boston, MA 02114 and from the area offices of the Division of Employment Security.

Statistics to assist firms participating in Affirmative Action Programs are available from aforementioned labor market economists.

2. Wage Rates

a. Hours and Earnings of Production Workers in the State are found in the monthly "Employment Review" by the Massachusetts Division of Employment Security. (see Appendix G)

b. Bureau of Labor Statistics, U.S. Department of Labor publications –

– "Area Wage Surveys, Metropolitan Areas" (annually)

– "Industry Wage Surveys" e.g., machinery workers

– "Occupational Earnings and Wage Trends in Metropolitan Areas" (annually in 3 part series)

– "Occupational Earnings in Selected Areas" (annually in 3 part series)

IX ECONOMIC DEVELOPMENT (Cont'd)

C. DEVELOPMENT ASSISTANCE

Development assistance is available from many sources at the federal, state, regional and local levels. Among the most important (from which other sources can be suggested) are: Small Business Administration of the U.S. Dept. of Commerce, local industrial development commissions, and the regional development commissions (see X PLANNING).

The Massachusetts Department of Commerce and Development provides advice and services on the following:

- Available land and buildings
- Data on the wage rates, labor supply and other statistics on the work force
- Help secure investment capital for growing businesses
- Supply information on numerous tax incentives
- Answer questions relative to transportation facilities, natural resources and environmental regulations
- Encourage foreign investment in Massachusetts and assist Massachusetts companies in exporting their goods

D. BUSINESS ASSISTANCE PROGRAMS

State Office of Minority Business Assistance(SOMBA) - established to make other state agencies more sensitive to the needs of minority entrepreneurs, increase state purchase of goods and services from minority businesses, and develop programs upgrading the management skills of minority businessmen and businesswomen in Massachusetts.

Business Visitation Program - Visitation program by the Massachusetts Department of Commerce and Development personnel to manufacturers and non-manufacturers to increase the awareness among businesses of the State's concern for their economic well-being, make known the State's broad spectrum of business aids and improve relationships between industry and State agencies.

Small Business Assistance Division - Small business assistance program providing counseling and referral to appropriate local, state and federal resource groups.

Massachusetts Industrial Finance Agency - Administers the Industrial Revenue Bond and Industrial Mortgage Insurance Program.

Massachusetts Technology Development Corporation - Provides the technical assistance and start-up capital to small, innovative technology based businesses.

Massachusetts Capital Resource Company - Funded by domestic life insurance firms, it will invest $100 million in Massachusetts companies.

Massachusetts Community Economic Development Assistance Corporation - Provides technical assistance to community based organizations in their efforts to effect community revitalization and job creation.

Training Assistance Program - Customized training of employees by the Massachusetts Department of Manpower Development.

X PLANNING

The Commonwealth has been divided into 13 regional planning districts encompassing 343 municipalities. The districts form such distinct economically and socially integrated areas that they are quite suitable for logical planning regions and could quite reasonably form the basis for dividing the state into other types of economic, political or social districts – such as counties (if, indeed, we need counties), regional governments, sales territories, etc. The regional planning districts were set up to plan for the economic and social growth of their respective regions and to aid their member municipalities in their local planning efforts.

329 municipalities, containing about 99% of the State's population, have planning boards.

212 municipalities have prepared master plans with the use of federal funds – other municipalities have accomplished master plans with local funds.

304 municipalities containing about 98% of the State's population; regulate zoning.

Regional Planning Commissions in Massachusetts

Berkshire Regional Planning Commission,
10 Fenn Street, Pittsfield 01201

Cape Cod Planning & Economic Development Commission,
First District Court House, Barnstable 02630

Central Massachusetts Regional Planning Commission,
71 Elm Street, Worcester 01609

Lower Pioneer Valley Planning Commission,
26 Central Street, West Springfield 01089

Martha's Vineyard Commission,
Box 1447, Oak Bluffs 02557

Merrimack Valley Planning Commission,
350 Main Street, Haverhill 01830

Metropolitan Area Planning Council,
110 Tremont Street, Boston 02108

Montachusett Regional Planning Commission,
150 Main Street, Fitchburg 01420

Nantucket Planning & Economic Development Commission,
Broad Street, Nantucket 02554

Northern Middlesex Area Commission,
144 Merrimack Street, Lowell 01852

Old Colony Planning Council,
9 Belmont Street, Brockton 02401

Southeastern Regional Planning & Economic Development District, 25 Barnum Street, Taunton 02780

XI UTILITIES

A. ELECTRIC SERVICE

Electric power is available to all municipalities in Massachusetts.

To insure better service, New England was one of the first areas of the country to have interchange of power between companies. Presently, the generating units of northeastern United States and Canada have united in the Northeastern Power Coordinating Council, a mutual assistance agency to exchange electric power to prevent "brown-outs" and "black-outs." This system is computer controlled to assure reliability of power sources.

To increase efficiency and capacity, as well as to offset increased inflationary costs of power, the Commonwealth now has two nuclear generating plants (at Plymouth in the east and Rowe in the west) and 2 massive pumped hydro plants.

B. GAS SERVICE

Natural gas is available in all the major industrial and population centers. The various private companies or municipal departments supplying gas to individual customers are serviced by either Algonquin Gas Transmission System or the Tennessee Gas Transmission System.

C. WATER SERVICE

The following are chemical analyses of samples taken from different surface sources in the Commonwealth by the Dept. of Environmental Quality Engineering, 1981.

MILLIGRAMS PER LITER

	Boston Tap in City Hall(1)	Worcester Tap in City Hall	Springfield Tap in City Hall	New Bedford Tap in City Hall	Lowell Tap in City Hall	Pittsfield Tap in City Hall
Turbidity	0.4	.99	0.6	0.4	0.0	0.7
Color	13	NA	15	0	0	13
pH	7.6	6.0	6.2	7.0	6.3	6.2
Alkalinity	10	5.	5	13	7	8
Hardness	12.	15.	12.	20.	16.	22.
Calcium	3.5	NA	2.9	6.0	4.9	6.0
Magnesium	0.7	NA	1.1	1.3	0.9	1.7
Sodium	7.8	NA	5.0	12.	16.	2.3
Potassium	0.8	NA	0.6	0.7	0.8	0.8
Iron	0.05	.13	0.08	0.14	0.00	0.09
Manganese	0.00	NA	0.01	0.00	0.02	0.00
Silica	2.00	NA	2.0	1.2	4.0	2.9
Sulfate	21	NA	5	20	28	5.0
Chloride	7.0	15.	10.	13.	17.	5.0
Ammonia-N	0.16	NA	0.01	0.00	0.21	0.00
Nitrate-N	0.1	NA	0.1	0.0	0.10	0.3
Copper	0.01	NA	0.12	0.00	0.3	0.14
Spec. Cond.	64	65	54	115	115	68

(1) Source of Supply is Water District, Metropolitan District Commission – Supplying 32 municipalities (in whole or in part) in the Boston area and 9 municipalities outside the M.D.C. area.

Revised
Mar. 82

METROPOLITAN AREAS
AND
STANDARD METROPOLITAN STATISTICAL AREAS
WITHIN THE NORTHEAST AMERICAN MARKET

Total Inclusion
Canadian Metropolitan Areas

Chicoutimi-Jonquière (Qué.)
Halifax (Nova Scotia)
Hamilton (Ont.)
Kitchner (Ont.)
London (Ont.)
Montréal (Ont.)
Oshawa (Ont.)
Ottawa-Hull (Ont.-Qué.)
Québec (Qué.)
St. Catherines-Niagara (Ont.)
St. John (New Brunswick)
Toronto (Ont.)
Trois-Rivières (Qué.)

U.S. Standard Metropolitan Statistical Areas

Albany-Schenectady-Troy, NY
* Allentown-Bethlehem-Easton, PA-NJ
Altoona, PA
* Atlantic City, NJ
* Baltimore, MD
Bangor, ME
* Binghamton, NY-PA
* Boston, MA
* Bridgeport, CT
* Bristol, CT
* Brockton, MA
Buffalo, NY
Burlington, VT
Charlotteville, VA
Cumberland, MD-WV
* Danbury, CT
* Elmira, NY
Erie, PA
* Fall River, MA-RI
* Fitchburg-Leominster, MA
Glens Falls, NY
Hagerstown, MD
* Harrisburg, PA
* Hartford, CT
* Jersey City NJ
Johnstown, PA
* Lancaster, PA
* Lawrence-Haverhill, MA-NH
Lewiston-Auburn, ME
* Long Branch-Asbury Park, NJ
* Lowell, MA
* Manchester, NH
* Meriden, CT
* Nashua, NH
* Nassau-Suffolk, NY
* New Bedford, MA
* New Britain, CT
* New Brunswick-Perth Amboy-Sayreville, NJ
* New Haven-West Haven, CT
* New London-Norwich, CT
* New York, NY-NJ
* Newark, NJ
* Newburg-Middletown, NY
Newport News-Hampton, VA
Norfolk-Virginia Beach-Portsmouth, VA-NC
* Northeast Pennsylvania
* Norwalk, CT
* Patterson-Clifton-Passaic, NJ
Petersburg-Colonial Heights-Hopewell, VA
* Philadelphia, PA-NJ
Pittsburg, PA
Pittsfield, MA
Portland, ME
Portsmouth-Dover-Rochester, NH-ME
* Poughkeepsie, NY
* Providence-Warwick-Pawtucket, RI-MA
* Reading, PA
Richmond, VA
Rochester, NY
Sharon, PA
* Springfield-Chicopee-Holyoke, MA-CT
* Stamford, CT
State College, PA
Steubenville-Weirton, OH-WV
Syracuse, NY
* Trenton, NJ
Utica-Rome, NY
* Vineland-Millville-Bridgeton, NJ
* Washington, DC-MD-VA
* Waterbury, CT
Williamsport, PA
* Wilmington, DE-NJ-MD
* Worcester, MA
* York, PA
Youngstown-Warren, OH

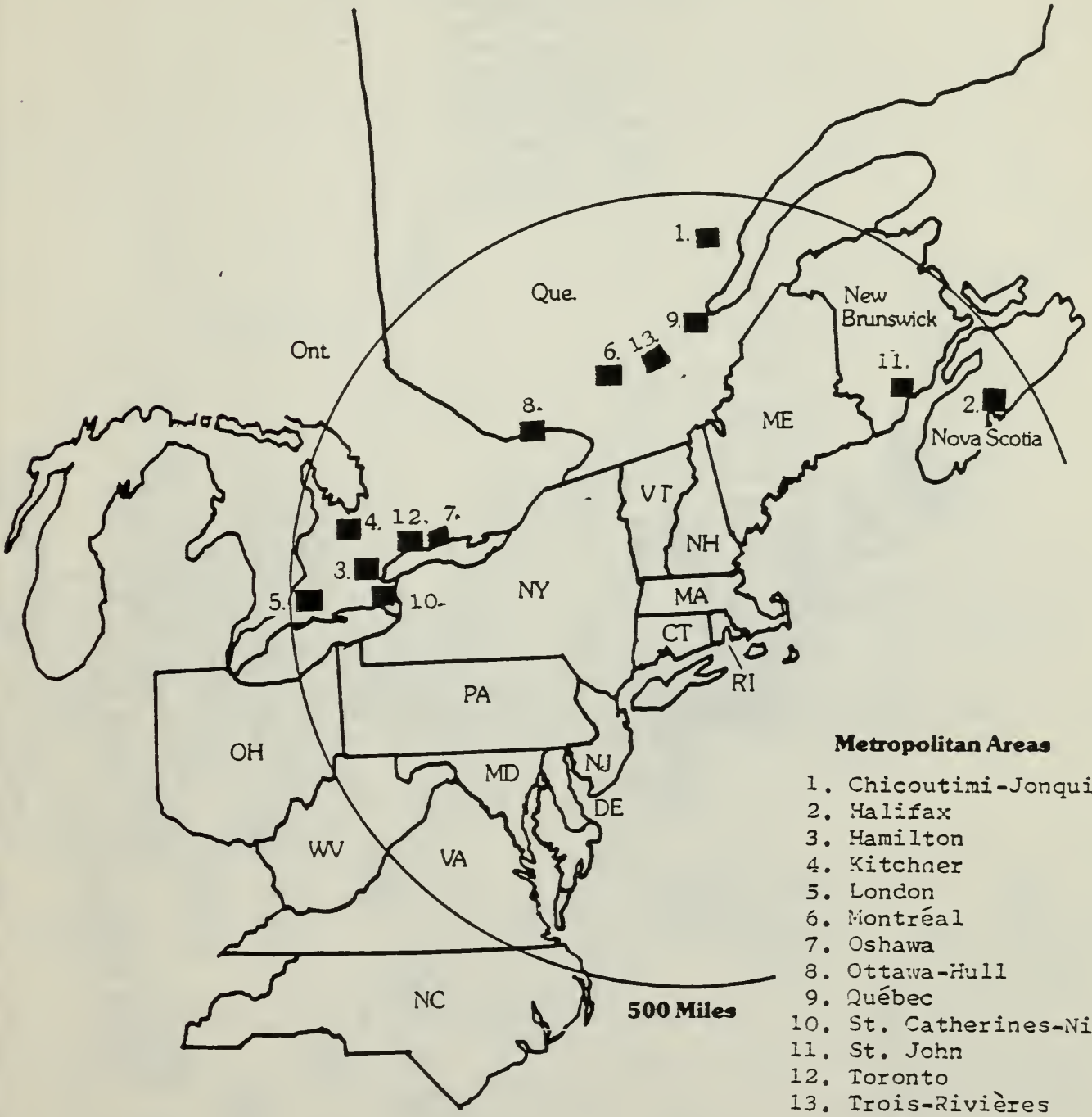
*Part of Eastern U.S. Megapolis

Partial Inclusion of 4 SMSA's

Akron, OH
Canton, OH
Cleveland, OH
Wheeling, WV-OH

NORTHEAST AMERICAN MARKET

CANADIAN METROPOLITAN AREAS



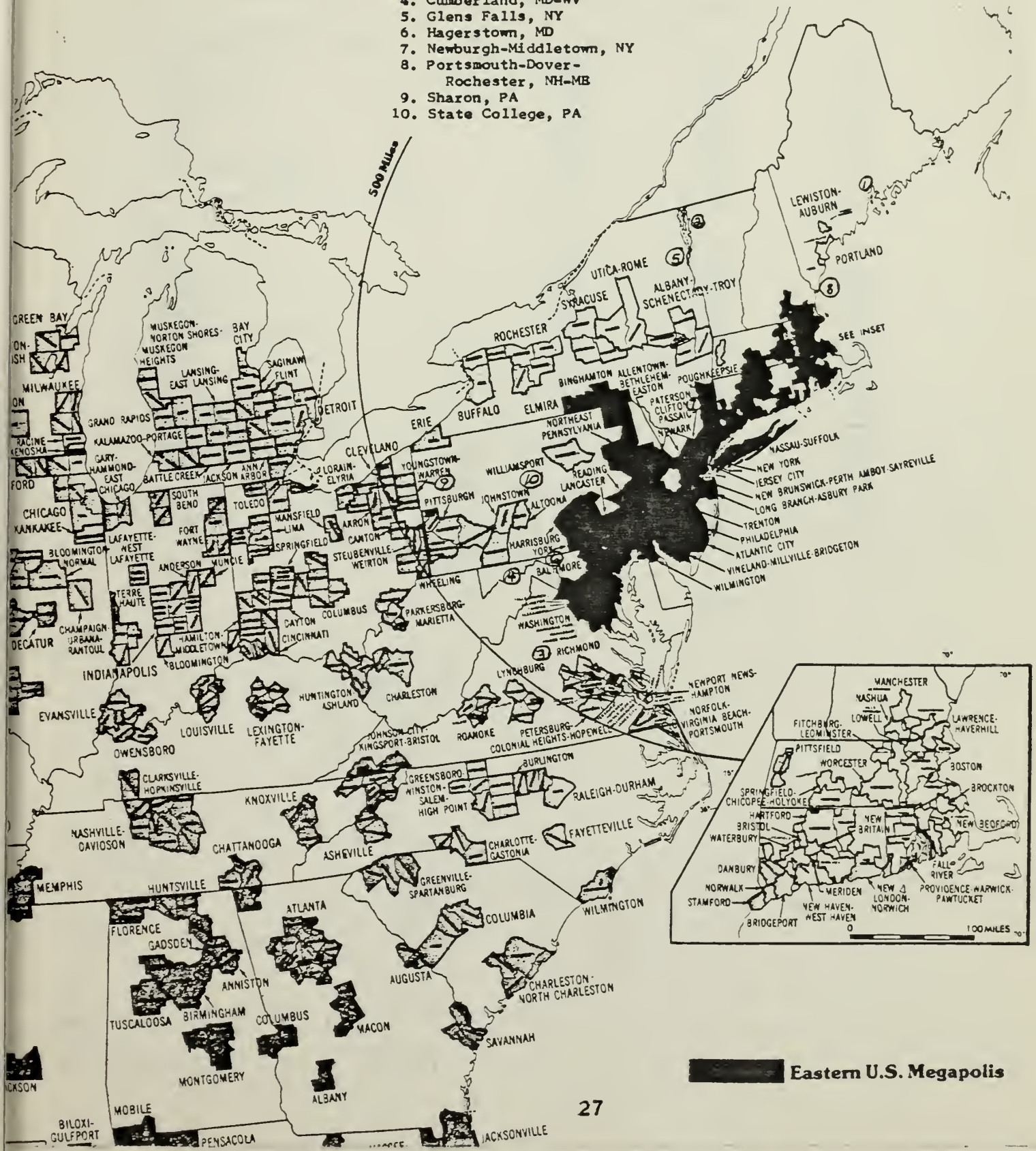
Metropolitan Areas

1. Chicoutimi-Jonquière
2. Halifax
3. Hamilton
4. Kitchner
5. London
6. Montréal
7. Oshawa
8. Ottawa-Hull
9. Québec
10. St. Catherines-Niagara
11. St. John
12. Toronto
13. Trois-Rivières

NORTHEAST AMERICAN MARKET
STANDARD METROPOLITAN STATISTICAL AREAS

NEWLY DESIGNATED SMSAs (1981)

1. Bangor, ME
2. Burlington, VT
3. Charlottesville, VA
4. Cumberland, MD-WV
5. Glens Falls, NY
6. Hagerstown, MD
7. Newburgh-Middletown, NY
8. Portsmouth-Dover-Rochester, NH-ME
9. Sharon, PA
10. State College, PA

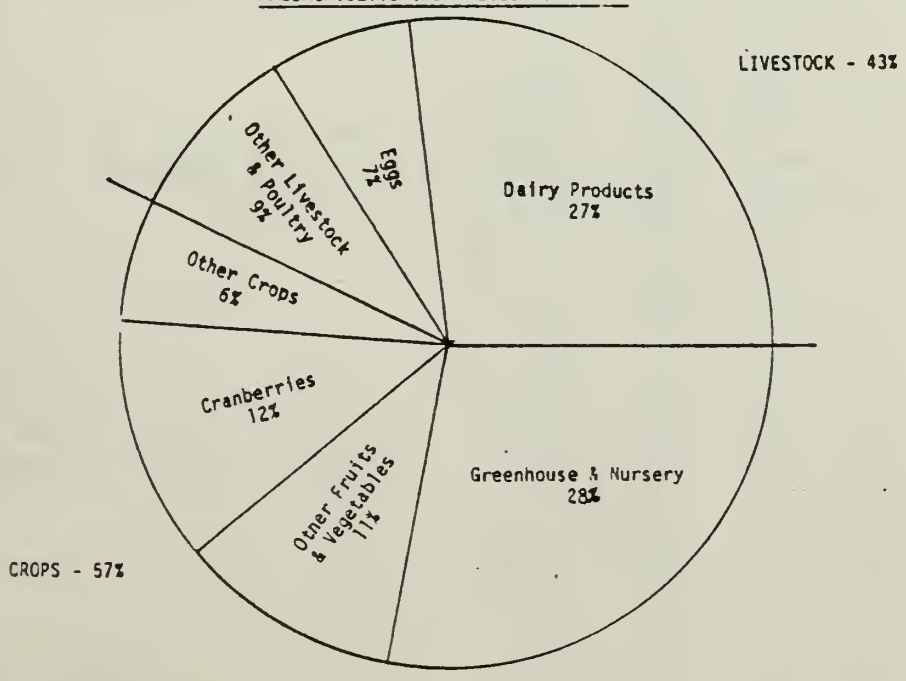


CASH RECEIPTS FROM FARM MARKETING

CASH RECEIPTS FROM FARM MARKETINGS, MASSACHUSETTS, 1979-1981

COMMODITY	1979	1980	1981
		Thousand Dollars	
LIVESTOCK AND LIVESTOCK PRODUCTS			
Cattle and Calves	12,728	13,017	13,100
Hogs	7,841	5,988	5,515
Sheep and Lambs	163	179	161
Dairy Products	73,833	79,726	85,989
Chickens	653	525	817
Eggs	20,638	20,177	22,933
Turkeys	1,820	1,927	2,345
Miscellaneous Poultry	2,573	2,308	2,875
Miscellaneous Livestock	3,189	3,151	3,118
Total Livestock and Livestock Products	123,438	126,998	136,853
CROPS			
Hay	2,463	2,346	2,509
Tobacco	8,404	10,833	14,895
Potatoes	4,153	4,338	5,136
Cabbage	878	1,237	1,465
Sweet Corn	5,817	6,563	8,752
Tomatoes	2,386	3,103	3,276
Miscellaneous Vegetables	3,298	2,345	2,371
Apples	11,799	13,103	12,590
Peaches	544	570	35
Cranberries	27,972	30,562	39,176
Berries	1,611	1,365	1,404
Miscellaneous Fruits	249	260	283
Maple Products	445	313	788
Forest Products	1,308	1,308	1,308
Greenhouse and Nursery	92,447	91,372	90,556
Miscellaneous Crops	231	248	143
Total Crops	164,005	169,866	184,687
TOTAL RECEIPTS	287,443	296,864	321,540

MASSACHUSETTS CASH RECEIPTS - 1981



Revised
Aug. 83

GROSS STATE PRODUCT

MASSACHUSETTS GROSS STATE PRODUCT BY INDUSTRY
CONSTANT DOLLARS
(Millions)

	1976	1977	1978	1979	1980	1981
TOTAL GROSS STATE PRODUCT	34,308	35,492	36,731	38,152	38,946	39,777
Agricultural Services, Forestry, Fisheries	98	99	117	127	122	122
Mining	17	18	17	17	17	15
Construction	1,040	1,009	972	973	937	966
Manufacturing	8,822	9,475	10,107	10,488	10,593	10,847
Durables	5,449	6,026	6,608	6,996	7,192	7,444
Lumber & Wood	70	71	71	72	74	81
Furniture & Fixtures	89	89	101	100	98	101
Primary Metals	186	191	234	238	229	231
Fabricated Metals	687	724	751	773	762	742
Machinery, except Electrical	1,229	1,366	1,494	1,685	1,824	1,946
Electrical Machinery	1,360	1,561	1,708	1,864	2,005	2,102
Transportation Equip., ex. Motor Vehicles	407	422	459	461	439	396
Motor Vehicles	124	177	190	172	163	162
Stone, Clay & Glass Products	185	180	216	225	214	214
Instruments	801	913	1,045	1,052	1,022	1,095
Miscellaneous Manufacturing	309	332	340	353	361	374
Nondurables	3,373	3,449	3,499	3,492	3,401	3,403
Food & Kindred Products	513	490	476	494	513	498
Textiles	332	370	370	361	343	345
Apparel	371	379	390	376	369	365
Paper	484	502	520	514	469	460
Printing & Publishing	547	562	567	563	569	593
Chemicals	424	432	438	453	458	462
Petroleum	(D)	52	57	61	47	54
Tobacco	(D)	2	0	0	0	0
Rubber & Misc. Plastics	418	441	458	444	428	431
Leather	242	220	222	227	205	195
Trade	5,966	6,139	6,216	6,411	6,306	6,427
Wholesale Trade	2,443	2,512	2,542	2,673	2,638	2,713
Retail Trade	3,523	3,627	3,674	3,738	3,668	3,714
Finance, Insurance & Real Estate	5,982	5,976	6,063	6,446	7,013	7,295
Banking	782	781	743	773	817	863
Other	5,200	5,195	5,320	5,673	6,195	6,432
Transportation	924	970	1,019	1,049	978	936
Communications & Public Utilities	2,037	2,129	2,191	2,243	2,391	2,450
Communications	1,231	1,314	1,386	1,439	1,567	1,664
Public Utilities	806	815	805	804	823	785
Services	5,321	5,444	5,743	6,106	6,290	6,573
Business & Repair Services	1,080	1,092	1,233	1,383	1,498	1,639
Professional, Social & Related Services	3,613	3,699	3,842	4,045	4,132	4,266
Other Services	628	653	669	679	660	668
Government	4,006	4,137	4,184	4,207	4,207	4,052
Federal	991	1,027	1,040	1,019	1,024	1,024
State & Local	3,016	3,110	3,144	3,189	3,183	3,028
Farm	93	97	102	86	93	93
TOTAL PER CAPITA (dollars)	5,968	6,179	6,396	6,640	6,789	6,889

Source: Federal Reserve Bank of Boston

LOCATIONS OF MAJOR MANUFACTURING GROUPS

(with 490 employees or more in one group)

1979

Appendix F
Revised
Nov. '80

SIC 20 Food & Kindred Prod.	SIC 25 Furniture and Fixtures	SIC 28 Chemicals&Allied Prod.	SIC 32 Abrasive & Stone Prod.	SIC 35 (cont.)	SIC 36 (cont.)	SIC 38 Instrument and Allied Prod.
Boston	Boston	Andover	Westborough	Chicopee	Chelmsford	Ashland
Cambridge	Gardner	Boston	Worcester	Dalton	Danvers	Bedford
Canton	Worcester	Cambridge		Deerfield	Fall River	Billerica
Fall River		Easthampton	SIC 33	East Longmeadow	Framingham	Boston
Gloucester	SIC 26	Everett	Primary Metals	Everett	Gloucester	Burlington
Lawrence	Paper and	Leominster	Attleboro	Fitchburg	Hudson	Cambridge
Lowell	Allied Prod.	Peabody	Boston	Gardner	Lawrence	Concord
Lynn	Boston	Pittsfield	New Bedford	Gloucester	Lexington	East Bridgewater
Natick	Chelsea	Springfield	South Hadley	Greenfield	Littleton	Foxborough
New Bedford	Chicopee	Woburn	Springfield	Holyoke	Lowell	Framingham
Wilbraham	Erving	Worcester	Worcester	Lawrence	Lynn	Holyoke
Worcester	Fitchburg			Leominster	Marlborough	Leominster
	Framingham	SIC 30	SIC 34	Lexington	Maynard	Lexington
SIC 22	Holyoke	Plastic&Rubber Prod.	Fabricated Metals	Lowell	Melrose	Lynn
Textiles	Lawrence	Boston	Attleboro	Lynn	Methuen	Medfield
Adams	Lee	Braintree	Boston	Marlborough	Natick	Milford
Boston	Leominster	Canton	Braintree	Maynard	New Bedford	Needham
Brockton	Lowell	Chicopee	Burlington	New Bedford	Newton	New Bedford
Fall River	Palmer	Clinton	Cambridge	Newton	North Adams	Norwood
Lawrence	Peabody	Easthampton	Chicopee	Northbridge	North Andover	Randolph
Lowell	Pittsfield	Fall River	Gardner	Norwood	Pittsfield	Salem
Needham	South Hadley	Lawrence	Grafton	Quincy	Salem	Southbridge
New Bedford	Springfield	Leominster	Lawrence	Randolph	Springfield	Sturbridge
Springfield	Walpole	New Bedford	Malden	Southborough	Stoneham	Waltham
Taunton	West Springfield	Taunton	Monson	Springfield	Sudbury	Watertown
Uxbridge	Westfield	Wilmington	New Bedford	Tewksbury	Waltham	Wilmington
Webster	Worcester	Worcester	Norwood	Wakefield	Watertown	
Worcester			Peabody	Walpole	West Bridgewater	
	SIC 27	SIC 31	Somerville	Waltham	West Springfield	SIC 391-396
SIC 23	Printing and	Leather & Leath. Prod.	Southbridge	Warren	Weymouth	Jewelry &
Apparel & Fin.	Publishing	Agawam	Waltham	Watertown	Wilmington	Silverware
Goods	Boston	Boston	West Springfield	Wellesley	Woburn	Attleboro
Boston	Cambridge	Brockton	Westfield	Westfield	Worcester	North Attleborough
Braintree	Fall River	Cambridge	Woburn	Westminster		Taunton
Brockton	Framingham	Chicopee	Worcester	Wilmington		
Burlington	Holyoke	East Brookfield	Wrentham	Woburn	SIC 37	SIC 394
Cambridge	Lawrence	Fall River		Worcester	Transport. Equip.	Sporting Goods,
Douglas	Lexington	Haverhill	SIC 35		Andover	Games and Toys
Fall River	Lowell	Lawrence	Machinery (ex. elec.)	SIC 36	Bedford	Acushnet
Fitchburg	New Bedford	Lowell	Agawam	Elec. & Electronics Equip.	Boston	Chicopee
Lawrence	Plympton	Lynn	Athol	Andover	Everett	Salem
Lowell	Quincy	Marlborough	Attleboro	Attleboro	Framingham	
New Bedford	Springfield	New Bedford	Beverly	Bedford	Lowell	SIC 399
Springfield	Taunton	Peabody	Billerica	Beverly	Lynn	Brushes
Taunton	Westford	Salem	Boston	Boston	Springfield	Northampton
Warren	Worcester	Webster	Burlington	Braintree	Westfield	
Worcester		Worcester	Canton	Burlington		
				Cambridge		

NONAGRICULTURAL WAGE & SALARY EMPLOYMENT
FOR CALENDAR YEAR 1982 — REVISED TO 1ST QTR 1982 BENCHMARK

INDUSTRY	JAN.	FEB.	MAR.	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	AVG.
NONAGRICULTURAL EMPLOYMENT	2,582.8	2,595.2	2,616.3	2,630.3	2,654.5	2,655.5	2,598.2	2,606.0	2,625.4	2,630.6	2,635.9	2,633.1	2,622.0
Manufacturing	654.9	651.5	652.4	644.8	647.2	648.1	619.8	631.7	633.0	623.9	620.6	614.5	636.9
Durable Goods	404.6	402.4	404.6	398.3	400.2	398.1	390.7	386.1	386.4	378.2	377.4	375.3	392.0
Lumber & Furniture	12.0	11.6	11.8	11.7	11.7	11.8	10.5	11.3	11.3	11.1	11.3	11.3	11.5
Stone,Clay & Glass	11.9	11.7	11.7	11.9	12.2	12.4	12.0	11.9	11.4	11.3	11.2	10.9	11.7
Primary Metals	16.7	16.6	16.5	16.0	15.9	15.8	15.0	14.7	14.7	14.1	14.3	14.0	15.4
Fabricated Metals	50.0	49.7	49.4	48.7	48.0	47.9	46.0	45.7	45.8	45.7	45.5	44.8	47.3
Cutlery,Hand tools,Hardware	11.1	11.1	11.0	10.6	10.7	10.6	10.0	10.4	10.3	10.4	10.3	10.2	10.6
Machinery, except electrical	108.2	107.3	106.9	106.0	105.5	105.2	105.1	103.8	103.4	101.2	101.1	100.7	104.5
Metalworking machinery	16.8	16.6	16.4	15.6	15.7	15.4	14.6	14.7	14.6	13.0	13.6	13.2	15.0
Special industry machinery	15.4	15.2	15.1	15.0	14.8	14.2	14.3	13.6	13.9	13.8	13.7	13.4	14.3
* Office & computing machines	49.1	48.9	48.7	49.1	49.6	50.5	50.6	51.0	50.4	50.3	50.3	50.5	49.9
Electrical & Electronic machinery,equip.,etc.	113.4	113.4	113.6	114.2	113.7	113.6	111.0	110.8	110.3	109.3	108.8	108.3	111.6
Communications equipment	35.0	35.1	35.2	35.2	34.4	34.2	34.2	34.3	33.9	33.7	33.4	33.6	34.3
Electronic components	52.4	52.3	52.5	52.7	52.8	53.0	51.5	51.8	51.9	51.4	51.4	51.1	52.1
Transportation equipment	31.0	30.7	33.8	29.4	33.0	30.4	32.7	30.0	32.8	28.8	28.9	28.9	30.9
Instruments	61.4	61.4	60.9	60.4	60.2	61.0	58.4	57.9	57.2	56.7	56.3	56.4	59.1
Measuring & Control devices	23.0	22.9	22.9	23.0	23.0	23.3	22.1	21.8	21.5	21.5	21.4	21.6	22.4
Nondurable Goods	250.3	249.1	247.8	246.5	247.0	250.0	229.1	245.6	246.1	245.7	243.2	239.2	244.9
Food & kindred products	24.7	24.1	24.0	23.6	23.9	24.6	24.5	24.9	25.2	25.7	25.8	25.4	24.7
Textile mill products	22.1	21.6	21.8	21.8	21.6	21.3	18.8	20.2	20.5	20.3	20.5	20.5	20.9
Apparel	38.1	38.5	38.3	37.8	38.7	39.1	27.6	39.1	38.6	38.3	37.6	36.3	37.3
Mens & Boys suits,coats & furnishings	9.0	9.0	9.0	9.2	9.1	9.2	6.7	9.0	8.8	8.5	8.4	8.4	8.7
Paper & allied products	27.2	27.0	26.0	26.2	26.0	26.3	25.2	25.8	26.4	26.1	26.2	26.1	26.2
Paper	5.5	5.4	5.2	5.2	5.1	5.3	5.0	5.0	5.2	4.7	5.0	4.9	5.1
Paperboard containers	8.1	8.1	8.0	7.9	8.1	8.1	7.5	7.9	8.2	8.3	8.2	8.2	8.1
Printing & Publishing	45.5	45.8	45.8	45.8	45.9	46.4	46.1	45.2	45.1	45.0	44.5	44.4	45.5
Newspapers	13.7	13.8	13.8	13.8	13.8	13.7	13.5	13.5	13.3	13.3	13.5	13.4	13.6
Chemicals	17.8	17.7	17.7	17.6	17.4	17.9	17.6	18.0	17.1	17.4	17.1	16.8	17.5
Rubber & miscellaneous Plastic products	30.0	29.8	29.8	29.6	29.5	29.9	28.9	29.2	29.4	29.5	28.9	28.4	29.4
Miscellaneous Plastic products	22.0	21.9	21.9	21.8	21.8	22.3	21.3	21.7	21.4	21.5	21.1	20.8	21.6
Leather & Leather products	19.3	19.2	19.1	19.2	19.2	19.6	16.7	19.0	18.7	18.3	18.0	17.5	18.6
Footwear, except rubber	11.3	11.1	11.0	11.1	10.9	11.2	9.8	11.0	10.6	10.3	10.0	9.8	10.6
Miscellaneous Manufacturing Industries	24.1	24.0	23.9	23.3	23.0	23.1	21.9	22.4	23.3	23.3	22.8	22.2	23.1
Jewelry	9.1	9.0	8.8	8.6	8.6	8.7	8.0	8.7	9.0	9.4	9.3	9.1	8.8
* High Technology Industries	243.9	243.7	243.2	243.4	243.0	244.7	239.4	239.0	237.2	235.2	234.4	234.2	240.1
Construction	70.3	67.2	69.2	74.7	80.3	83.4	84.0	84.6	83.6	82.7	81.1	77.3	78.2
Transportation, Communication & Public Utilities	117.7	118.0	118.1	118.4	119.5	121.2	116.8	117.5	120.5	119.7	119.2	119.1	118.8
Electric, Gas, & Sanitary services	18.2	18.2	18.1	18.0	18.1	18.5	18.6	18.6	18.3	18.0	18.0	18.2	18.2
Wholesale & Retail trade	550.3	552.5	555.2	564.6	574.6	581.0	572.2	570.9	577.4	570.2	576.9	587.9	570.1
Finance, Insurance & Real Estate	164.5	164.1	165.2	166.1	168.3	171.3	173.0	172.9	170.8	167.5	167.1	167.9	168.2
Banking	51.6	51.4	51.5	51.5	51.5	52.4	52.3	52.2	51.6	51.3	51.4	51.5	51.7
Services & Mining	651.1	670.0	680.5	688.7	689.6	681.1	678.2	678.7	685.0	697.4	696.3	693.0	682.5
Health Services	218.5	218.5	219.2	218.8	218.6	221.6	217.6	217.8	219.2	221.6	223.3	222.3	219.8
Educational Services	95.7	113.0	118.3	118.7	113.1	91.5	85.4	87.2	98.2	113.2	116.9	115.1	105.5
Government	366.0	371.9	375.7	373.0	375.0	369.4	354.2	349.7	355.1	369.2	374.7	373.4	367.3
Federal	55.8	56.4	56.2	56.2	56.1	56.5	56.4	56.2	55.0	55.1	54.9	54.8	55.8
U.S. Postal Service	20.5	20.5	20.4	20.4	20.4	20.4	20.5	20.5	20.3	20.3	20.3	20.3	20.4
State	88.0	92.3	94.0	93.3	93.5	87.5	88.3	88.2	90.0	95.3	95.8	94.8	91.8
Educational services	24.6	29.7	31.3	31.3	31.1	23.9	23.9	23.2	27.9	31.7	32.6	31.3	28.5
Local	222.2	223.2	225.5	223.5	225.4	225.4	209.5	205.3	210.1	218.8	224.0	223.8	219.7
Educational services	127.4	128.4	130.8	128.8	130.6	129.3	107.1	103.9	114.6	125.9	128.7	129.0	123.7

* - Not currently validated by the U.S. Bureau of Labor Statistics.

Appendix G

Revised
Oct. 83

NONAGRICUTURAL WAGE AND SALARY EMPLOYMENT

JUNE 1983 — Revised to 1st Qtr 1982 Benchmark

INDUSTRY	EMPLOYMENT (in thousands)			Net change to Current month from:	
	JUNE 83	MAY 83	JUNE 82	MAY 83	JUNE 82
NONAGRICULTURAL EMPLOYMENT	2636.5	2634.3	2655.5	2.2	-19.0
Manufacturing	619.5	611.9	648.1	7.6	-28.6
Durable Goods	375.7	372.9	398.1	2.8	-22.4
Lumber & Furniture	11.7	11.8	11.8	-0.1	-0.1
Stone,Clay & Glass	10.5	10.2	12.4	0.3	-1.9
Primary Metals	14.7	14.4	15.8	0.3	-1.1
Fabricated Metals	44.5	44.3	47.9	0.2	-3.4
Cutlary,Hand tools,Hardware	10.3	10.3	10.6	0.0	-0.3
Machinery, except electrical	98.0	97.0	105.2	1.0	-7.2
Metalworking machinery	12.1	12.3	15.4	-0.2	-3.3
Special industry machinery	11.9	12.1	14.2	-0.2	-2.3
* Office & computing machines	51.4	50.7	50.5	0.7	0.9
Electrical & Electronic machinery,equip.,etc.	108.4	108.5	113.6	-0.1	-5.2
Communications equipment	33.4	32.9	34.2	0.5	-0.8
Electronic components	52.3	51.7	53.0	0.6	-0.7
Transportation equipment	32.5	31.7	30.4	0.8	2.1
Instruments	55.6	55.0	61.0	0.6	-5.6
Measuring & Control devices	20.6	20.6	23.3	0.0	-2.7
Nondurable Goods	243.8	239.0	250.0	4.8	-6.2
Food & kindred products	24.5	23.7	24.6	0.8	-0.1
Textile mill products	21.8	21.4	21.3	0.4	0.5
Apparel	38.6	37.5	39.1	1.1	-0.5
Mens & Boys suits,coats & furnishings	8.2	8.2	9.2	0.0	-1.0
Paper & allied products	25.9	25.3	26.3	0.6	-0.4
Paper	5.1	5.0	5.3	0.1	-0.2
Paperboard containers	7.8	7.7	8.1	0.1	-0.3
Printing & Publishing	44.1	43.7	46.4	0.4	-2.3
Newspapers	13.7	13.7	13.7	0.0	0.0
Chemicals	17.4	16.7	17.9	0.7	-0.5
Rubber & miscellaneous Plastic products	30.5	29.8	29.9	0.7	0.6
Miscellaneous Plastic products	22.0	21.5	22.3	0.5	-0.3
Leather & Leather products	17.2	17.2	19.6	0.0	-2.4
Footwear, except rubber	9.2	9.2	11.2	0.0	-2.0
Miscellaneous Manufacturing industries	22.1	22.0	23.1	0.1	-1.0
Jewelry	8.9	8.9	8.7	0.0	0.2
* High Technology Industries	234.5	233.5	244.7	1.0	-10.2
Construction	75.4	71.7	83.4	3.7	-8.0
Transportation, Communication & Public Utilities	119.5	117.7	121.2	1.8	-1.7
Electric, Gas, & Sanitary services	18.7	18.4	18.5	0.3	0.2
Wholesale & Retail trade	581.1	572.4	581.0	8.7	0.1
Finance, Insurance & Real Estate	175.1	170.9	171.3	4.2	3.8
Banking	54.1	52.5	52.4	1.6	1.7
Services & Mining	696.5	714.6	681.1	-18.1	15.4
Health Services	223.4	222.6	221.6	0.8	1.8
Educational Services	94.4	120.2	91.5	-25.8	2.9
Government	369.4	375.1	369.4	-5.7	0.0
Federal	56.0	55.5	56.5	0.5	-0.5
U.S. Postal Service	20.3	20.1	20.4	0.2	-0.1
State	89.4	96.9	87.5	-7.5	1.9
Educational services	25.5	32.9	23.9	-7.4	1.6
Local	224.0	222.7	225.4	1.3	-1.4
Educational services	127.9	129.9	129.3	-2.0	-1.4

Note: Current month estimate preliminary.
* - Not currently validated by the U.S. Bureau of Labor Statistics.
R - Revised

Appendix H

Revised
Oct. 83

MASSACHUSETTS' RANKINGS AMONG
THE 50 STATES
(extracts from 1982-83 Statistical Abstract)

Item	Rank	State	U.S.
Total population 1980	11th	5,737,037	226,545,805
Land area 1980.....Sq. mi.	45th	7,824	3,539,295
Population per square mile 1980	3rd	733.3	64.0
Percent change in population, 1970-1980	47th	.8%	11.4%
Median age 1980.....Years	7th	31.1	30.0
Population 65 years old and over 1980	10th	12.7% of population	11.3% of population
Non-White population 1980	35th	6.5% of population	16.9% of population
Black population 1980	28th	3.9% of population	11.7% of population
Asian and Pacific Islander 1980	14th	.9% of population	1.5% of population
American Indian, Eskimo, and Aleut 1980	39th	.1% of population	.6% of population
Spanish population 1980	18th	2.5% of population	6.4% of population
Metropolitan population 1980	8th	85.3% of population	74.7% of population
Persons living in different State in 1975 (5 years old and over) 1980	44th	7.0% of population	9.7% of population
Brith rate 1/ 1979	50th	12.2	15.9
Death rate 1/ 1979	14th	9.0	8.5
Marriage rate 1/ 1980	43rd	8.5	10.9
Divorce rate 1/ 1980	48th	2.9	5.3
Legal abortions per 1,000 live births 1980	3rd	609	428
Physicians per 100,000 population 1980	1st	272	185
Hospital beds per 100,000 population 1980	4th	750	602
Personal health care expenditures per capita 1978.	1st	$935	$745

1/ per 100,000 resident population

Total housing units 1980	11th	2,208,146	88,411,263
Year-round housing units 1980, percent -			
Built between 1970 and 1980	49th	15.4%	26.2%
Prior to 1940	2nd	47.3%	25.8%
With 5 or more units in structure	11th	20.5%	17.5%
With air conditioning	37th	36.9%	55.0%
Homeownership rate 1980	47th	57.5%	64.4%
Median value of specified owner-occupied housing units 1980	17th	$48,400	$47,200
Median gross rent of specified renter-occupied housing units 1980	12th	$255	$243
Crime rate 1/ 1981	19th	5,835	5,800
Federal and state prisoners per 100,000 population 1981	47th	65	153
Public elementary and secondary schools 1981-			
Expenditures per capita	8th	$529	$434
Current expenditures per pupil	3rd	$3,174	$2,350
Public school teachers salaries 1982	12th	$19,900	$19,000
Percent high school graduates (persons 25 years old and over) 1980	17th	72.2%	66.5%
Undergraduate enrollment in institutions of higher education 1979	9th	272,209	8,820,657
Civilian labor force 1981	10th	2,961,000	108,670,000
Unemployment rate 1981	35th	6.3%	7.6%
Manufacturing employment 1979			
Number	11th	694,192	21,914,754
Percent of employed	14th	26.2%	22.4%
Average weekly earnings of production workers in manufacturing 1981	35th	$280	$318

1/ per 100,000 resident population.

MASSACHUSETTS

Item	Rank	State	U.S.
Median household money income 1979	19th	$17,575	$16,841
Per capita money income 1979	16th	7,458	$7,298
Percent below poverty level 1979			
Persons	43rd	9.6%	12.4%
Children under 18 years	33rd	13.1%	16.0%
State and local governments 1981-			
Expenditures, total	10th	$13.6 billion	$487.0 billion
Expenditures per capita	11th	$2,377	$2,150
Tax revenues per capita	5th	$1,348	$1,079
Debt per capita	19th	$1,873	$1,606
Federal Government expenditures per capita, 1981.	11th	$2,757	$2,414
Percent of voting-age population casting votes for President 1980	13th	59.4%	53.2%
Motor vehicles per 1,000 population 1980	42nd	671	713
Means of transportation to work 1980			
Percent of workers commuting in carpools	35th	19.1%	19.7%
Percent using car, truck, or van	42nd	80.2%	84.1%
Motor vehicle traffic fatalities per 100,000 licensed drivers 1980	48th	24	35
Energy Consumption per capita 1980	49th	213 million Btu	334 million Btu
Temperature, average annual	35th	48.3° F.	53.2° F.
Precipitation, average annual	14th	44.2 in.	28.8 in.
Farms 1978			
Number	43rd	5,891	2,478,642
Land in Farms	46th	.7 million acres	1,029.7 million acres
Acreage per farm 1982	47th	119 acres	433 acres
Average value of farm land and buildings per acre 1982	9th	$1,707	$788
Gross farm income 1981	44th	$.4 billion	$161.2 billion
Mineral production, value 1980	43rd	$.1 billion	$143.9 billion
Construction contracts, value 1981	17th	$ 3.2 billion	$150.2 billion
Manufacturing shipments, value 1980	13th	$43.5 billion	$1,850.9 billion
Manufacturing employment 1980, percent-			
Export related 1/	7th	4.7%	3.6%
Defense related 2/	6th	6.9%	3.6%
Retail sales per capita 1977	34th	$3,216	$3,291

1/ Percent of total private sector employment
2/ Percent of all manufacturing employment

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